WATERBODY DATA FORM

ENSR AECOM

Logbook No.: 1 Logbook Page No.: 139, 140 Tract No.: ML-SD-TR-11460.000 Picture No.: SSATR002_SW.NE, PHYSICAL ATTRIBUTES Waterbody Sketch Plan	Date: 7/10/08	Proje	ect Name & No.: Key	ystone XL-1	0623-007-803	Associated	Milepost		ALL VANSA
PHYSICAL ATTRIBUTES Waterbody Sketch Plan Please include: Directional & North Arrow, Centerline, Length of feature, Distances from Centerline, Photo Locations, and Survey corridor Note: Angle of Crossing at Centerline:	Investigators: 54	4	State/Co	unty: SD/ 1	RIPP	GH.	Quad Name: WEWELA CREEK		
PHYSICAL ATTRIBUTES Waterbody Sketch Plan Please include: Directional & North Arrow, Centerline, Length of feature, Distances from Centerline, Photo Locations, and Survey corridor Angle of Crossing at Centerline:	Logbook No.: 1	Logbo	ok Page No.: 139, 140	Tract N	o.: ML-SD-TR	-11460.000	Picture N	O.: S5ATR002	2 SW.NE,E
Please include: Directional & North Arrow, Centerline, Length of feature, Distances from Centerline, Photo Locations, and Survey corridor Angle of Crossing at Centerline: Angle of Crossing at Centerline:									10000
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Waterbody Type Lake Pond Borrow Pit River Stream Ag. Ditch Other: Stream Flow Fast Moderate Slow Flow type Perennial (Flows year round) Direction of Flow when it crosses CL: SW (N, Seasonal (Continuous flow ≥ 3 months) NE. E. SE, S. SW (N, NE) Subsurface Flow? Yes No Unknown Sinuosity Streight (Flows only in response to rainfall) NE, E. SE, S. SW, W, NW) OHWM Width (ft.): 4 Sinuosity Straight Meandering Stream Width (ft.) Top of Bank (at crossing location): 6 Water Surface (at crossing location): 4 Stream Depth (in.) O-3 3-6 6-12 12-18 18-24 24-36 36-48 48-60 60 OHWM Indicator Clear natural line on bank Wrack line Shelving Scour Water staining Wrested vegetation Water staining Soil character changes Sediment deposition Sediment deposition Sediment sorting Wrested vegetation Water staining Litter and debris Left: 0-2 2-4 4-6 6-8	and the second s			/					
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Waterbody Type □ Lake □ Pond □ Borrow Pit □ River □ Stream □ Ag. Ditch Other: Stream Flow □ Fast □ Moderate □ Slow Flow type □ Perennial (Flows year round) □ Direction of Flow when it crosses CL: SW (N, NE, E, SE, S, SW (N, NE) □ Very Slow □ No □ Unknown □ Ephemeral (Flows only in response to rainfall) NE, E, SE, S, SW, W, NW) Subsurface Flow? □ Yes □ No □ Unknown □ Strought □ Strought □ Meandering OHWM Width (ft.): 4 Sinuosity □ Straight □ Meandering Stream Depth (in.) □ 0-3 □ 3-6 □ 6-12 □ 12-18 □ 18-24 □ 24-36 □ 36-48 □ 48-60 □ 60 OHWM Indicator □ Clear natural line on bank □ Wrack line □ Shelving □ Scour □ Water staining □ Clear natural debris □ Leaf litter disturbed □ Other: □ 6-8 □ 8+ Bank Height (ft.) □ 0-2 □ 2-4 □ 4-6 □ 6-8	T.		der trom den gert Alaca Tart Ras						
Stream Flow		To The	200						
Stream Flow	Angle of Cross	sing at Cent	erline: <u>490°</u>						
type				River	☑ Stream		Other:		
Subsurface Flow?	Waterbody Type	Lake	Pond Borrow Pit		☐ Perennial (FI	lows year round)		Direction of I	Flow where
Yes No Unknown Value	Waterbody Type	Lake	Pond Borrow Pit	Flow	Perennial (Fl	lows year round) ontinuous flow ≥ 3	months)	it crosses CL	.: SW (N,
OHWM Width (ft.): Stream Width (ft.) Top of Bank (at crossing location): 6 Stream Depth (in.) OHWM Indicator Clear natural line on bank Wrack line Bent, matted or missing vegetation Sediment deposition Sediment sorting Litter and debris Left: O-2 2-4 Bank Slope (looking downstream) Straight Meandering	Waterbody Type	Lake Fast	Pond Borrow Pit Moderate Slow	Flow	Perennial (Fl. Seasonal (Co. Intermittent (F. Ephemeral (F.	lows year round) ontinuous flow ≥ 3 Flows <3 months)	months)	it crosses CL NE, E, SE, S	.: SW (N,
Stream Width (ft.) Top of Bank (at crossing location): 6	Waterbody Type Stream Flow	Lake Fast Very Slow	Pond ☐ Borrow Pit Moderate ☐ Slow None	Flow type	Perennial (Fl. Seasonal (Co. Intermittent (F. Ephemeral (F.	lows year round) ontinuous flow ≥ 3 Flows <3 months)	months)	it crosses CL NE, E, SE, S	_: SW (N,
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OHWM Indicator Clear natural line on bank	Waterbody Type Stream Flow Subsurface Flow? OHWM Width (ft.):	Lake Fast Very Slow Yes	Pond Borrow Pit Moderate Slow None No Unknown	Flow type	Perennial (Fl. Seasonal (Co Seasonal (Co Intermittent (Fl. Ephemeral (Frainfall)	lows year round) ontinuous flow ≥ 3 Flows <3 months) Flows only in respo	months) onse to ☑ Mear	it crosses CL NE, E, SE, S NW)	.: SW (N,
Abrupt plant community change	Waterbody Type Stream Flow Subsurface Flow? OHWM Width (ft.): Stream Width (ft.)	Lake Fast Very Slow Yes 4 Top of Bank (a	Pond Borrow Pit Moderate Slow None No Unknown at crossing location): 6	Flow type Sinuosity	Perennial (Fl. Seasonal (Co Intermittent (Fl. Ephemeral (Frainfall)	lows year round) pontinuous flow ≥ 3 Flows <3 months) Flows only in respond	months) onse to Mean ion): 4	it crosses Ct NE, E, SE, S NW)	.: SW (N, S, SW, W,
Soil character changes Litter and debris Leaf litter disturbed Cher: Sediment sorting Sediment sorting Cher:	Waterbody Type Stream Flow Subsurface Flow? OHWM Width (ft.): Stream Width (ft.)	Lake Fast Very Slow Yes Top of Bank (a	Pond Borrow Pit Moderate Slow None No Unknown at crossing location): 6 3-6	Flow type Sinuosity	Perennial (Fl. Seasonal (Co Seasonal (Co Intermittent (Fl. Ephemeral (Frainfall)) Straigl Water Surface	lows year round) ontinuous flow ≥ 3 Flows <3 months) Flows only in respond	months) onse to Mean ion): 4	it crosses Ct NE, E, SE, S NW)	.: SW (N, S, SW, W,
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Right:	Subsurface Flow? OHWM Width (ft.): Stream Width (ft.) Stream Depth (in.) OHWM Indicator Bank Height (ft.) (looking downstream)	Lake Fast Very Slow Yes 4 Top of Bank (a 0-3 Clear natur Abrupt plar Soil charac Litter and d Left: Right:	Pond Borrow Pit Moderate Slow None No Unknown at crossing location): 6 3-6 G-12 ral line on bank nt community change cter changes debris 0-2	Flow type Sinuosity 12-1 Wrack line Bent, matt vegetation Sediment Leaf litter 2-4	Perennial (Fl. Seasonal (Co. Seasonal (Co. Intermittent (Fl. Ephemeral (Frainfall)) Straigh Water Surface 18	lows year round) pontinuous flow ≥ 3 Flows <3 months) Flows only in responsible ht (at crossing locati	months) onse to Mean ion): 4 36-48 etation rting 6-8	it crosses Ct. NE, E, SE, S NW) ndering 48-60 Scour Water sta	∴ SW (N, S, SW, W,

Page 2 of 2

Feature ID #: S5ATR002

(check all that apply) S C Stream Substrate % S	Clear Clear Clightly Turbid Clightr:	Turbid Very Turbid		surface	Floation		1000
check all that apply) Stream Substrate % Co	Slightly Turbid Other:	Turbid Very Turbid		surface	Fleetin	4 🗖	101
and the contract of the C			Greenish	color 🔲		lgal mats urface scum	Water Color:
	Silts/ Clay 100% Concrete Other:	Cobbles Muck Explain:		Bedrock Vegetation:	Sands	Gravel	
check all that apply) G	Sand Bar 🔲 Gravel Bar 🗍 /lud Bar 🔲 Jndercut Banks 🔲	Gravel Riffles Deep Pools Bank root systel Overhanging tre	ns □	POTAM In-strea	m emergent pla IOGETUM m submerged p wetlands:	nts: ☑ <i>CAREX ARTI</i> ants: □	HENODES,
Observed (check ail Sthat apply)	Vaterfowl Snakes nvertebrates:	Fish (adult) ☐ Fish (juvenile) [tles 🗌 gs 🔲	Other:		711
CAMPINE CO	Circle vegetative la	getation zone from ed lyers: trees ☐ sl areas within riparian a	nrubs 🔲 he	erbs 🛛 💮		FT): 0 on-buffered concentra	ated flows
ributary is	Natural	☐Artificial (Man-Ma		Manipulate	ed	Lift Are	
	Channelization or Braiding	Unnatural straighter	ning Down	cutting Dil	kes/Berms 🗌	Excessive ban erosion	k Other
	ivestock access to Vaste discharge p	o riparian zone ⊠ ipes present □	£	Manure i Other:	n stream or on b	anks 🛚	
Describe Habitat Charact	teristics, Aquation	& Terrestrial Diver	sity: , JUNCUS	BALTICU		t ID No.: M JUBATUM	
CHANNEL PASSES T LANDOWNER STATE				RE			
Comments (e.g. pipeline cr	ossing angle, co	nstruction constrain	nts, eroslon	potential, ex	sting disturba	nces, and meanders	AVE OFFICE OF
STREAM QUALITY High		Moderat	e 🛚		Low		